

WHAT IS CLAIM IS:

1. An electrical stimulation device comprising:

a sensor for detecting a movement event of a body  
5 part,

an electrode for making electrical contact with an  
area of the body part, and

a controller coupled to the sensor and electrode for  
receiving a sensor signal indicating the movement event,  
10 and for outputting to the electrode an output comprising a  
rise signal, a stimulation signal and a fall signal, and  
programmed to record a duration of use and a number of  
movement events during the duration of use.

15 2. An electrical stimulation device for controlling the  
movement of a body part comprising:

a sensor for detecting a movement event of a body  
part,

an electrode for making electrical contact with an  
20 area of the body part and for stimulating a muscle of the  
body part,

a housing to be worn by a user of the device,  
a receiver on the housing for receiving wireless signals  
from a remote unit, and

a controller provided in the housing and coupled to the receiver for receiving stimulation data from the remote unit and storing the stimulation data in a stimulation file, and coupled to the sensor for receiving a sensor  
5 signal indicating the movement event, and for generating a control signal using the stimulation file in response to the movement event, and for outputting the control signal to the electrode.

10 3. The device of claim 2 wherein the controller is also programmed for generating a log file storing a duration of use and a number of movement events during the duration.

4. The device of claim 2 wherein the stimulation data  
15 includes a stimulation intensity level, a rise time, a stimulation time, and a fall time.

5. The device of claim 4 wherein the stimulation data also includes a pulse form, a triggering period, a  
20 triggering method and triggering criteria.

6. The device of claim 2 further including a computer removably coupled to the controller for downloading the stimulation file and log file, and for updating the  
25 stimulation file, and programmed to store data from the

stimulation and log files in a database, and for outputting for display the stimulation data and the duration of use and the number of movement events.

5    7.    The device of claim 6 wherein the computer is a Personal Digital Assistant.

8.    The device of claim 6 wherein the database also includes information about the user of the device, and the  
10    computer is programmed for accessing the database by a Windows<sup>TM</sup> graphical user interface.

9.    The device of claim 2 wherein the remote unit is a handheld remote control unit.

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10.    The device of claim 2 wherein the body part is a foot and the sensor is a heel switch.